

REMARKS

The Office Action dated June 30, 2006 has been received and carefully noted. The above amendments to the claims, and the following remarks, are submitted as a full and complete response thereto.

Claims 1, 5, 15, and 19 have been amended to more particularly point out and distinctly claim the subject matter of the invention. New claims 29 and 30 have been added. No new matter has been added. Claims 1-30 are currently pending in the application and are respectfully submitted for consideration.

Claims 1, 2, 5, 8, 9, 12, 15, 19, 21, and 25 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chow (U.S. Patent No. 6,445,911) in view of Foti (U.S. Patent No. 6,654,606). The Office Action took the position that Chow discloses all of the elements of the claims, with the exception of storing data regarding the location update including the subscriber's TA in the HSS so as to be protected against loss of the location information of the subscriber in the mobile network. The Office Action then cites Foti as allegedly disclosing this element of the claims. The rejection is respectfully traversed for the reasons which follow.

Claim 1, upon which claims 2-4 are dependent, recites a method of recovering location information of a subscriber in a mobile network. The method includes forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber's Transport Address (TA) which is a current Care of Address of the subscriber. The method further includes forwarding a location

update of the subscriber in the mobile network from the S-CSCF to a Home Subscription Server (HSS) including the subscriber's TA and an address of the S-CSCF, and storing data regarding the location update including the subscriber's TA in the HSS so as to be protected against loss of the location information of the subscriber in the mobile network.

Claim 5, upon which claims 6-7 are dependent, recites a method of recovering location information of a subscriber in a mobile network. The method includes forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber's Transport Address (TA); which is a current Care of Address of the subscriber. The method further includes forwarding a location update of the subscriber in the mobile network from the S-CSCF to a Home Subscription Server (HSS) including the subscriber's TA, and storing data regarding the location update including the subscriber's TA in the S-CSCF so as to be protected against loss of the location information of the subscriber in the mobile network.

Claim 8, upon which claims 9-11 are dependent, recites a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of recovering location information of a subscriber in a mobile network. The method includes forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber's Transport Address (TA) which is a current Care of Address of the subscriber. The method further includes forwarding a location update of the subscriber in the mobile network from the S-CSCF to an Home Subscription Server (HSS) including the

subscriber's TA and an address of the S-CSCF, and storing data regarding the location update including the subscriber's TA in the HSS so as to be protected against loss of the location information of the subscriber in the mobile network.

Claim 12 recites a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of recovering location information of a subscriber in a mobile network. The method includes forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber's Transport Address (TA) which is a current Care of Address of the subscriber. The method further includes forwarding a location update of the subscriber in the mobile network from the S-CSCF to a Home Subscription Server (HSS) including the subscriber's TA, and storing data regarding the location update including the subscriber's TA in the S-CSCF so as to be protected against loss of the location information of the subscriber in the mobile network.

Claim 15, upon which claims 16-18 are dependent, recites a method including recovering location information of a subscriber in a mobile network. The method further includes, upon a Serving-Call State Control Function (S-CSCF) receiving a call setup request for the subscriber from an Interrogating-Call State Control Function (I-CSCF), the S-CSCF forwards a route request to a User Mobility Server (UMS) and receives a home address from the UMS. The method further includes forwarding the call setup request from the S-CSCF to a home agent at the home address of the subscriber,

forwarding the call setup request from the home agent to the subscriber, and forwarding an address update from the subscriber to the S-CSCF.

Claim 19, upon which claim 20 is dependent, recites a method including recovering location information of a subscriber in a mobile network. The method further includes, upon an Interrogating-Call State Control Function (I-CSCF) receiving a call setup request for the subscriber, the I-CSCF forwards a route request to a User Mobility Server (UMS) and receives a home address of the subscriber from the UMS. The method further includes forwarding the call setup request from the I-CSCF to a home agent at the home address of the subscriber, forwarding the call setup request from the home agent to the subscriber, and forwarding an address update from the subscriber to the I-CSCF.

Claim 21, upon which claims 22-24 are dependent, recites a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of recovering location information of a subscriber in a mobile network. The method includes, upon a Serving-Call State Control Function (S-CSCF) receiving a call setup request for the subscriber from an Interrogating-Call State Control Function (I-CSCF), the S-CSCF forwards a route request to a User Mobility Server (UMS) and receives a home address of the subscriber from the UMS. The method further includes forwarding the call setup request from the S-CSCF to a home agent at the home address of the subscriber, forwarding the call setup request from the home agent to the subscriber, and forwarding an address update from the subscriber to the S-CSCF.

Claim 25, upon which claims 26-28 are dependent, recites a program storage device readable by a machine, tangibly embodying a program of instructions executable by the machine to perform a method of recovering location information of a subscriber in a mobile network. The method includes, upon an Interrogating-Call State Control Function (I-CSCF) receiving a call setup request for the subscriber, the I-CSCF forwards a route request to a User Mobility Server (UMS) and receives a home address of the subscriber from the UMS. The method further includes forwarding the call setup request from the I-CSCF to a home agent at the home address of the subscriber, forwarding the call setup request from the home agent to the subscriber, and forwarding an address update from the subscriber to the I-CSCF.

As will be discussed below, Chow and Foti fail to disclose or suggest the subject matter of the presently pending claims and, therefore, fail to provide the features outlined above.

Chow discloses an apparatus and method for providing local cordless service, which essentially provides a mobile wireless subscriber loop. Subscribers to the local cordless service subscribe to a home neighborhood zone and optionally may subscribe to visiting neighborhood zones from which the subscriber may place telephone calls without having to pay air time charges. The local cordless service radio equipment interfaces to a local digital line switch rather than a mobile switching center. When a subscriber roams outside the subscribed zones they may be switched from the local cordless service to a conventional personal communications service and pay air time charges.

Foti discloses a Call State Control Function (CSCF) and method of processing a call to a called mobile station (MS). The method is performed in the CSCFs in a third generation Internet Protocol (3G.IP) network. When an incoming call setup message such as a Fast Setup or Location Request message is received in the CSCF, the CSCF first determines via a relationship function, whether the CSCF is the Home CSCF for the called MS. If so, a first set of call processing steps are performed. If the CSCF is not the Home CSCF, the CSCF determines if it is currently serving the called MS. If the CSCF is the Serving CSCF, a second set of call processing steps are performed. If the CSCF is neither the Home CSCF nor the Serving CSCF for the called MS, a third set of call processing steps are performed.

Applicants respectfully submit that Chow and Foti, whether viewed individually or combined, fail to disclose or suggest all of the elements of the present claims. For example, the combination of Chow and Foti does not disclose or suggest “forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber’s Transport Address (TA) which is a current Care of Address of the subscriber,” as recited in claims 1, 5, 8, and 12. The Office Action cites Chow, and specifically Fig. 4A of Chow, as allegedly disclosing this element of the claims. Applicants respectfully disagree.

Chow merely discloses that the mobile station 10 sends an IS-136 registration message to the intelligent base station (IBS) 130. As such, Chow does not disclose or suggest that the subscriber forwards the registration request to a Serving-Call State

Control Function or that the request includes the subscriber's Transport Address which is a Care of Address of the subscriber, as recited in the claims. Foti also fails to disclose or suggest this element of the claims. Therefore, the combination of Chow and Foti fails to disclose or suggest "forwarding a registration request from the subscriber to a Serving-Call State Control Function (S-CSCF) including the subscriber's Transport Address (TA) which is a current Care of Address of the subscriber," as recited in claims 1, 5, 8, and 12.

Similarly, Applicants respectfully submit that the combination of Chow and Foti does not disclose or suggest "upon a Serving-Call State Control Function (S-CSCF) receiving a call setup request for the subscriber from an Interrogating-Call State Control Function (I-CSCF), the S-CSCF forwards a route request to a User Mobility Server (UMS) and receives a home address from the UMS," as recited in claims 15 and 21, and similarly recited in claims 19 and 25. As mentioned above, Chow only discloses that the mobile station 10 sends an IS-136 registration message to the intelligent base station (IBS) 130. Chow makes no mention of a Serving-Call State Control Function that forwards a route request to a User Mobility Server (UMS) and receives a home address from the UMS. In fact, Chow does not contain any disclosure regarding the sending of a route request. Foti also fails to disclose or suggest this limitation of the claims. Therefore, the combination of Chow and Foti fails to disclose or suggest "upon a Serving-Call State Control Function (S-CSCF) receiving a call setup request for the subscriber from an Interrogating-Call State Control Function (I-CSCF), the S-CSCF

forwards a route request to a User Mobility Server (UMS) and receives a home address from the UMS,” as recited in claims 15 and 21, and similarly recited in claims 19 and 25.

For at least the reasons discussed above, the combination of Chow and Foti does not disclose or suggest all of the elements of independent claims 1, 5, 8, 12, 15, 19, 21, and 25. As such, Applicants respectfully request that the rejection of claims 1, 5, 8, 12, 15, 19, 21, and 25 be withdrawn.

Claims 3, 4, 6, 7, 10, 11, 13 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Foti and further in view of Taguchi (U.S. Patent No. 6,136,532). The Office Action took the position that Chow and Foti disclose all of the elements of the claims, with the exception of storing the data in non-volatile memory. The Office Action then cites Taguchi as disclosing this element of the claims. The rejection is respectfully traversed for the reasons which follow.

Chow and Foti are discussed above. Taguchi discloses a method of packet data transmission in a mobile radio data communication system, in which packet data can be transmitted from a LAN side to a given data communication terminal device on a personal station side. When transmitting packet data to the mobile data terminal equipment, the LAN side data terminal equipment transmits packet data including a packet address of the mobile data terminal equipment to the LAN. If the packet address included in the packet data received through the LAN is the packet address of the mobile data terminal equipment, the control unit reserves the packet data and requests the exchange to connect to the packet address. When a connection is requested to the packet

address, the exchange establishes a communication path for the control unit and transmits a signal including the packet address to the personal station through the wireless connection equipment. If the packet address included in the signal is a packet address corresponding to the mobile data terminal equipment, then the personal station transmits an acknowledgment signal. The exchange acknowledges the connection to the packet address to the control unit, and the control unit transmits the reserved packet data to the mobile data terminal equipment.

Applicants note that claims 3, 4, 6, 7, 10, 11, 13 and 14 are dependent upon claims 1, 5, 8, and 12, respectively. As discussed above, the combination of Chow and Foti does not disclose or suggest all of the elements of claims 1, 5, 8, and 12. In addition, Taguchi does not cure these deficiencies in Chow and Foti, as Taguchi also does not appear to disclose or suggest the registration request of the present invention. As such, Applicants submit that claims 3, 4, 6, 7, 10, 11, 13 and 14 should be allowed for at least their dependence upon claims 1, 5, 8, and 12, and for the specific limitations recited therein.

Claims 16, 22, and 26 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Foti and further in view of Sanchez-Herrero (U.S. Patent Pub. No. 2002/0147845). The Office Action took the position that Chow and Foti disclose all of the elements of the claims, with the exception of the forwarding of the route request to the UMS comprises forwarding an indication to the UMS that the S-CSCF fails to have a Care of Address of the subscriber. The Office Action then relies

upon Sanchez-Herrero as allegedly disclosing this element of the claims. The rejection is respectfully traversed for the following reasons.

Chow and Foti are discussed above. Sanchez-Herrero discloses a User Distribution Server (UDS) in a network having multiple servers and users which are each identified by a plurality of different user identifications. The UDS is located close to an entity disposed to request user information and the UDS responds to a query pertaining to a specific user by redirecting the query to the appropriate server or serving entity. The UDS implements a secondary database with user and server identification information obtained from primary user databases associated with or derived from the servers. The use of distinct primary and secondary databases simplifies data handling, since data changes and updates can be readily managed in the primary databases and then transferred to or actualized in the secondary database.

Applicants note that claims 16, 22, and 26 are dependent upon claims 15, 21, and 25, respectively. As discussed above, the combination of Chow and Foti does not disclose or suggest all of the elements of claims 15, 21, and 25. In addition, Sanchez-Herrero does not cure these deficiencies in Chow and Foti, as Sanchez-Herrero also does not disclose or suggest the route request of the present invention. As such, Applicants submit that claims 16, 22, and 26 should be allowed for at least their dependence upon claims 15, 21, and 25, and for the specific limitations recited therein.

Claims 17, 20, 23, and 27 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Foti and further in view of Bergenwall (U.S. Patent

No. 6,721,291). The Office Action took the position that Chow and Foti disclose all of the elements of the claims, with the exception of the forwarding of the call setup request from the home agent to the subscriber comprises forwarding the call setup request to a Care of Address of the subscriber. The Office Action then cites Bergenwall as allegedly disclosing this element of the claims. The rejection is respectfully traversed for the following reasons.

Chow and Foti are discussed above. Bergenwall discloses a method and system for anycast binding mobile communication. A mobile node registers itself with several foreign agents using a new registration type. One of the foreign agents is selected to forward the data packets of a data message to the mobile node. A selection algorithm which may be based on randomness, dynamic learning, message traffic congestion, or statistical information collected at the mobile node is utilized.

Claims 17, 20, 23, and 27 are dependent upon claims 15, 19, 21, and 25, respectively. As discussed above, the combination of Chow and Foti does not disclose or suggest all of the elements of claims 15, 19, 21, and 25. In addition, Bergenwall does not cure these deficiencies in Chow and Foti, as Bergenwall also does not disclose or suggest the route request of the present invention. As such, Applicants submit that claims 17, 20, 23, and 27 should be allowed for at least their dependence upon claims 15, 19, 21, and 25, and for the specific limitations recited therein.

Claims 18, 24, and 28 were rejected under 35 U.S.C. §103(a) as being unpatentable over Chow in view of Foti and further in view of Sanchez-Herrero and Bergenwall. The Office Action took the position that Chow, Foti and Sanchez-Herrero disclose all of the elements of the claims, with the exception of the forwarding of the call setup request from the home agent to the subscriber comprises forwarding the call setup request to a Care of Address of the subscriber. The Office Action then cites Bergenwall as allegedly disclosing this element of the claims. The rejection is respectfully traversed for the reasons which follow.

Claims 18, 24, and 28 are dependent upon claims 15, 21, and 25, respectively. As discussed above, the combination of Chow and Foti does not disclose or suggest all of the elements of claims 15, 21, and 25. In addition, Sanchez-Herrero and Bergenwall do not cure these deficiencies in Chow and Foti, as Sanchez-Herrero and Bergenwall also do not disclose or suggest the route request of the present invention. As such, Applicants submit that claims 18, 24, and 28 should be allowed for at least their dependence upon claims 15, 21, and 25, and for the specific limitations recited therein.

Applicants respectfully submit that the cited prior art fails to disclose or suggest all of the elements of the claimed invention. These distinctions are more than sufficient to render the claimed invention unanticipated and unobvious. It is therefore respectfully requested that all of claims 1-30 be allowed, and this application passed to issue.

If for any reason the Examiner determines that the application is not now in condition for allowance, it is respectfully requested that the Examiner contact, by

telephone, the applicants' undersigned attorney at the indicated telephone number to arrange for an interview to expedite the disposition of this application.

In the event this paper is not being timely filed, the applicants respectfully petition for an appropriate extension of time. Any fees for such an extension together with any additional fees may be charged to Counsel's Deposit Account 50-2222.

Respectfully submitted,



Majid S. AlBassam
Registration No. 54,749

Customer No. 32294
SQUIRE, SANDERS & DEMPSEY LLP
14TH Floor
8000 Towers Crescent Drive
Tysons Corner, Virginia 22182-2700
Telephone: 703-720-7800
Fax: 703-720-7802

MSA:jf

Enclosures: Petition for Extension of Time